

What is claimed is:

1. A folding apparatus for creating a stack of web material, comprising:
  - a first belt to which a web is releasably adhered, the first belt moving the web to a first side of the stack;
  - a first pair of pulleys;
  - a second belt on the first pair of pulleys;
  - a gripper on the second belt, the gripper periodically gripping the web and moving the web to a second side of the stack.
2. The folding apparatus of claim 1, wherein the gripper opens at one of the first pair of pulleys.
3. The folding apparatus of claim 2, wherein the web includes a non-perforated area and the gripper grips the web in the non-perforated area.
4. The folding apparatus of claim 1, wherein the first belt includes a smooth surface in contact with one side of the web, and wherein an upstream one of the first pair of pulleys includes a textured roller pressing the web against the smooth surface of the first belt.
5. A folding apparatus for folding a web into a stack of web material, comprising:
  - a first folding unit including a first pulley, a second pulley and a first belt supported by the first pulley and the second pulley, the smooth belt including a smooth surface releasably supporting the web and moving the web to a first fold of the stack; and
  - a second folding unit including a third pulley, a fourth pulley, a second belt supported by the third pulley and the fourth pulley, and a gripping assembly on the second belt, the gripping assembly periodically gripping the web and moving the web to a second fold of the stack.

6. The apparatus of claim 5, wherein the gripping assembly opens as it travels around the third pulley and closes as it travels between the third pulley and fourth pulley.
7. The apparatus of claim 6, wherein the first folding unit includes a tucking finger that inserts the web into the gripping assembly when the gripping assembly is open.
8. The apparatus of claim 7, wherein the first folding unit includes a fifth pulley that is in contact with and supports an inner surface of the first belt against the textured roller.
9. The apparatus of claim 8, wherein the fifth pulley is intermediate the first pulley and second pulley, the fifth pulley is adjacent the tucking finger, the fifth pulley is rotatably supported on a rotatable shaft, and the tucking finger is fixed to the shaft .
10. The apparatus of claim 9, wherein the first belt includes a plurality of first belts.
11. The apparatus of claim 10, wherein one tucking finger is positioned intermediate each adjacent pair of the plurality of first belts.
12. The apparatus of claim 5, wherein the second folding unit includes a textured roller pressing the web against the smooth surface of the first belt to adhere the web to the first belt.
13. The apparatus of claim 12, wherein the second folding unit includes a single shaft that rotatably supports the third pulley and supports the textured roller.
14. The folding apparatus of claim 12, wherein the textured roller includes a plurality of textured rollers.
15. The folding apparatus of claim 14, wherein the second belt includes at least two second

belts, each belt is positioned between two of the textured rollers.

16. The folding apparatus of claim 15, wherein each of the at least two second belts includes a gripping assembly.

17. The folding apparatus assembly of claim 16, wherein each of the gripping assemblies on the at least two second belts are synchronized and horizontally aligned.

18. The apparatus of claim 5, wherein the gripping assembly grips the web at a location equal to one length of an individual sheet of the web minus the length of material held in the gripping assembly.

19. The apparatus of claim 18, wherein the one length of an individual sheet is a length between perforations in the web.

20. The folding apparatus of claim 5, wherein the web is continuous.

21. The folding apparatus of claim 5, wherein the first belt includes a belt segment that periodically supports the web, wherein the belt segment travels at an angle of about 45 degrees relative to vertical.

22. The folding apparatus of claim 21, wherein the first belt initially contacts a vertically traveling web at the first pulley, and wherein the belt segment is downstream of the first pulley.

23. The folding apparatus of claim 5, wherein the second belt includes a belt segment that travels at an angle of about 45 degrees relative to vertical.

24. A method of folding a wet web, comprising:  
releasably adhering the wet web to a belt;

moving a first portion of the wet web to one side of a stack;  
gripping a second portion of the wet web off the belt; and  
moving the second portion of the wet web to a second side of the stack.

25. The method of claim 24, wherein the steps are repeated in order to stack a continuous web.
26. The method of claim 24, wherein adhering the web includes pressing the web against a smooth surface of the belt.
27. The method of claim 26, wherein pressing the web includes urging the web against the smooth surface of the belt with a textured roller.
28. The method of claim 24, wherein gripping the second portion of the web includes gripping the second portion off the belt.
29. The method of claim 28, wherein gripping includes tucking a portion of the web into a gripping assembly.
30. The method of claim 29, wherein gripping includes providing a gripping assembly on a second belt, opening gripping assembly as the second belt travels in an arcuate path, and closing the gripping assembly as the second belt travels in an essentially linear path.
31. The method of claim 30, wherein moving the second portion of the wet web includes moving the second portion away from the first belt to which the web is releasably adhered.